WHAT IS CLAIMED IS:

1. A thin-film transistor, comprising:

an active region;

a source region; and

a drain region, the source region and the drain region being provided at each side of the active region, respectively;

the source region and the drain region including regions adjacent to the active region, the adjacent regions including lightly doped impurity regions with an impurity concentration less than an impurity concentration of the drain region; and

the lightly doped impurity regions being provided in an asymmetrical form in which the lightly doped impurity region in the source region is smaller than the drain region.

2. The thin-film transistor according to claim 1, the length, in the longitudinal direction of a channel, of the lightly doped impurity region in the drain region being longer than the lightly doped impurity region in the source region.

3. A thin-film transistor, comprising:

an active region;

a source region; and

a drain region, the source region and the drain region being provided at each side of the active region, respectively;

wherein only the drain region includes region adjacent to the active region, the adjacent region includes LDD with an impurity concentration less than an impurity concentration of the drain region.

4. The thin-film transistor according to claim 1, further including a gate electrode provided at a position facing the active region, with an insulating layer provided therebetween,

the boundary between each lightly doped impurity region and the active region approximately matching one end of the gate electrode.

5. A switching circuit, comprising:

a first transistor provided in a load current path and controlling the load current;

a second transistor activating the first transistor in accordance with an input signal, the first and second transistors each having an LDD structure between a source and a drain; and

lightly doped impurity regions responsible for the LDD structure of the first transistor being provided so that one in a source region is smaller than the other in a drain region, thus adjusting the source/drain resistance to increase the load current.

6. The switching circuit according to claim 5, the lightly doped impurity regions that are responsible for the LDD structure provided between the source and drain of the first transistor being provided asymmetrically between the source region and the drain region.

7. A switching circuit, comprising:

a first transistor provided in a load current path and that controls the load current;

a second transistor activating the first transistor in accordance with an input signal, the first and second transistors each having an LDD structure between a source and a drain; and

wherein the LDD structure of the first transistor is set so that a lightly doped impurity region which is responsible for the LDD structure is provided only between the drain region and an active region of the first transistor.

8. An active element substrate, comprising:

an insulated substrate;

a plurality of scanning lines and a plurality of signal lines provided on the insulated substrate so as to intersect with each other; and

the switching circuit according to claim 5, the switching circuit controlling a current to be supplied to a current load, the switching circuit being provided at each intersection of the scanning lines and the signal lines.

9. An electro-optical device, comprising:

first and second electrodes that face each other;

an electro-optical element provided between the first electrode and the second electrode; and

the switching circuit according to claim 5, the switching circuit being connected to the first electrode and controlling a current to be supplied to the electro-optical element.

10. The electro-optical device according to claim 9, the electro-optical element including at least one of an electroluminescent element, an electrophotoluminescent element, a plasma light-emitting element, an electrophoresis element, and a liquid crystal element.

11. An electronic apparatus, comprising:

the electro-optical device according to claim 9 serving as a display unit.

12. A thermal head incorporated in a thermal transfer printer, comprising:

a plurality of heating elements; and

a plurality of switching circuits to control current to be supplied to corresponding heating elements, each of the plurality of switching circuits including the switching circuit according to claim 5.

13. A droplet ejecting head to generate a bubble in a solution to be ejected, comprising:

a heating element generating heat to generate the bubble;

an ejection hole through which solution is ejected; and

the switching circuit according to claim 5 used to control current to be supplied to the heating element.

14. A printer, comprising:

the thermal head according to claim 12.

15. A printer, comprising:

the droplet ejecting head according to claim 13.

16. A thin-film-transistor driving and light-emitting display device, comprising:

a plurality of scanning lines and a plurality of signal lines provided in a matrix; and

a switching thin-film transistor, a driving thin-film transistor, and a light-emitting element provided at each intersection of the scanning lines and the signal lines, the switching thin-film transistor sampling a potential of the signal line when the corresponding scanning line has an ON potential, the driving thin-film transistor controlling a light-emitting state of the light-emitting element in accordance with the sampled potential, and a lightly doped region being provided in the driving thin-film transistor only in a drain region.

17. A thin-film-transistor driving and light-emitting display device, comprising:

a plurality of scanning lines and a plurality of signal lines provided in a matrix; and

a switching thin-film transistor, a driving thin-film transistor, and a light-emitting element provided at each intersection of the scanning lines and the signal lines, the switching thin-film transistor sampling a potential of the signal line when the corresponding scanning line has an ON potential, the driving thin-film transistor controlling a light-emitting state of the light-emitting element in accordance with the sampled potential, lightly doped regions provided in the driving thin-film transistor in both a source region and a drain region,

and a length of the lightly doped region in the drain region being longer than a length of the lightly doped region in the source region.